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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,357	05/22/2002	Seiji Asaoka	1887	9914

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Karen G Kaiser
National Starch & Chemical Company
Box 6500
Bridgewater, NJ 08807-0500

EXAMINER	
WILLIAMS, LEONARD M	

ART UNIT	PAPER NUMBER
1617	

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HL

Office Action Summary	Application No.	Applicant(s)	
	10/049,357	ASAOKA ET AL.	
	Examiner	Art Unit	
	Leonard M. Williams	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/10/2004 has been entered.

Response to Arguments

The applicant's arguments filed 11/10/2004 to the rejection of claims 10-20 made by the examiner under 35 USC 103, 112-2nd, and the judicially created doctrine of provisional double patenting have been fully considered. The amendment of claims 17-19 to recite "...in an aqueous liquid" is sufficient to overcome the 112-2nd rejection maintained in the office action mailed 06/16/2004 and thus the 112-2nd rejection of claims 17-19 is withdrawn. The provisional double patenting rejection of claims 10, 15-16, 19, and 20 has been changed to a non-statutory double patenting rejection as the application relied upon for the provisional double patenting has now issued. The 103 rejection from the office action mailed on 06/16/2004 over claims 10, 14, 15, 17, 18, 20 as being unpatentable over Bhatt et al. (2002/0071811) in view of Kim et al. (6,335,003) and the 103 rejection of claims 11-13, 16, and 19 as being unpatentable over Bhatt et

al. and Kim et al. as applied to claims 10, 14, 15, 17, 18, 20 above, and further in view of de la Poterie et al. (5,972,354) in further view of Bolich et al. (5,100,658) are maintained for reasons discussed below. All rejections are based on references from the previous office action of 06/16/2004.

The applicant argues on page 9 paragraph 3 that Bhatt provides only propellants as the 'optional ingredient' in the compositions. The examiner respectfully disagrees. On page 6 sections 0067-0069, Bhatt discloses that the hair spray compositions can contain a variety of conventional optional ingredients including emulsifiers, such as anionic or nonionic surfactants, preservatives, cationic conditioners, such as cetyl trimethyl ammonium chloride, coloring agents, etc.. Additionally the aqueous formulations can contain plasticizers such as glycols, phthalate esters, glycerine, silicones, protein hydrosylates, emollients, lubricants, penetrants, lanolin compounds, ethylene adducts and polyoxyethylene cholesterol. Thus not only does Bhatt teach more than propellants as 'optional ingredient(s)', Bhatt discloses potential water-soluble polymers (anionic and nonionic surfactants, silicones, protein hydrosylates, ethylene adducts, and polyoxyethylene cholesterol) as 'optional ingredients'.

Bhatt teaches on page 10 section 0101 polyurethane resin W formed by reaction of polyoxyethylene diol, water, dried diol, diethylene diol, dimethylolpropionic acid and diglycolamine. Without evidence to the contrary some of the diglycolamine would react and be present in the final polyurethane resin, resulting in an amphoteric resin with a carboxylic acid and an amine within the same polymer molecule.

The applicants state on page 10 of the arguments that the examiner stated "there is no limitation in the instant claims that recites a water soluble resin in addition to the polyurethanes". The examiner agrees with the applicant on this point but does suggest making the claims clearer perhaps by stating: a composition comprising at least two components one being a polyurethane resin...and the other a water soluble resin other than said polyurethane resin. However as pointed out above this aspect is not enough to overcome the 103 rejection as Bhatt teaches a polyurethane resin that contains a carboxylic acid group and can contain an amine in one polymer. Kim teaches that secondary and tertiary amines are interchangable and Kim teaches a water soluble resin that could be combined with Bhatt's polyurethane resin. One of ordinary skill in the art at the time the invention was made would have realized that one could combine Bhatt's polyurethane resin with a carboxyl group and an amine with the water soluble resin of Kim, and further that the secondary and tertiary amines of Kim could be used to make the polyurethane resin of Bhatt. The motivation is the same as set forth in the previous office actions.

The applicants argue on page 12 that while de la Poterie disclose polyurethane resins, including a silicone-containing block, they do not suggest that it have both a carboxyl group and an amino group. The examiner respectfully disagrees. In col. 3 lines 10-40, de la Poterie teaches polycondensates that may be amphoteric polyurethanes comprising at least one silicone block, and that can be modified by reaction with a diisocyante and a difunctional organic compound (such as dihydro-, diamino-, or hydroxylamino-) additionally comprising either a carboxylic acid,

carboxylate, sulphonic group, or a neutralizable tertiary amine or quatertnary ammonium group. The applicant argues that Bolich does not teach or suggest urethane resins containing carboxyl groups and tertiary amine groups the examiner rspectfull disagrees and points out the particularly preferred polymers found in col. 17 lines 1-65, that disclose carboxylic acid groups, tertiary amines and siloxane polymers comprising singly polymer compounds (I-VIII). For reasons set forth above the rejection under 35 USC 103 is maintained.

The 103 rejections from the office action mailed on 06/16/2004 over claims 10, 14, 15, 17, 18, 20 as being unpatentable over Bhatt et al. (2002/0071811) in view of Kim et al. (6,335,003) and the 103 rejection of claims 11-13, 16, and 19 as being unpatentable over Bhatt et al. and Kim et al. as applied to claims 10, 14, 15, 17, 18, 20 above, and further in view of de la Poterie et al. (5,972,354) in further view of Bolich et al. (5,100,658) are restated below. The non-statutory double patenting rejection is detailed below.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6737069. Although the conflicting claims are not identical, they are not patentably distinct from each other because in the present application the invention is drawn to a composition comprising an amphoteric urethane resin having at least one carboxyl group and at least one tertiary amino group in one molecule, and a water soluble resin. Claim 16 of the present application is drawn to a resin having at least one polysiloxane bond, wherein a polysiloxane is a water soluble silicone polymer. US Patent No. 6737069 discloses a composition comprising an amphoteric urethane resin having at least one carboxyl group and at least one tertiary amino group in a molecule, and a silicone polymer. Both application and patent suggest using cationic, anionic, nonionic, and amphoteric water soluble urethane resins. US Patent No. 6737069 does not explicitly recite a water-soluble resin. However, the amphoteric urethane resin of the patent is a water-soluble resin. Thus, both the instant invention and US Patent 6737069 teach a composition comprising an amphoteric urethane resin having at least one carboxyl group and at least one tertiary amino group in one molecule, a silicone polymer, and a water soluble resin.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10, 14, 15, 17, 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatt et al. (2002/0071811) in view of Kim et al. (6,335,003).

The instant invention is directed toward a composition comprising an amphoteric urethane resin having at least one carboxyl group and at least one tertiary amino group in one molecule, and a water-soluble resin.

Bhatt et al. teach hair spray compositions containing a carboxylated polyurethane. The polyurethane contains polyoxyalkylene units, such as polyoxyethylene soft segments which impart hydrophilicity to the polyurethane. Amines, such as ethylenedamine, propylenedamine, monoethanolamine, and diglycolamine, can be added to the polyurethane resin reaction mixture.

The carboxylated polyurethane resins are soluble in ethanol/water mixtures. The reference lacks tertiary amines. See abstract; (0024J-(0025); (00361; (0050).
Kim et al. teach cosmetically acceptable polyurethane resins. The polyurethanes are formed from at least one diisocyanate or reaction product thereof with one or more compounds containing two or more active hydrogen atoms per molecule, and at least one diol, primary or secondary amino alcohol, primary or secondary diamine or primary or secondary triamine each with one or more tertiary, quaternary or protonated tertiary

amine nitrogen atoms. Propylene diamine is taught as a suitable diamine. The polyurethanes resins are taught as beneficial because of their flexibility and decrease of stickiness and brittleness when applied to the hair.

Hairsprays and hair setting lotions are taught as preferred forms of the compositions. See abstract', Col. 1, line 41-Col. 2, line 1 1,* Col. 2, line 58-1ine 65*, Col. 7, line 57-Co1. 8, line 7.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the tertiary amines taught by Kim et al. for the amines taught by Bhatt et al. because of the expectation of achieving a hair spray formulations that in addition to imparting excellent set retention to the hair, as taught by Bhatt, additionally decrease the stickiness and brittleness of the product when applied to the hair and maintain elasticity. Furthermore, it would hake been obvious to one of ordinary skill in the art at the time the invention was made to substitute the tertiary amines taught by Kim et al. for the amines taught by Bhatt et al. because Bhatt et al. teach diamines as part of their resins and Kim et al. teach diamines as interchangeable with tertiary for application to the hair.

It is respectfully pointed out amines in polyurethane resins that a) the carboxyl group and tertiary amine of the
combined polyurethane resin result in an amphoteric resin, and that b) the combined resin is a water-soluble resin.

Claims 1 1-13, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatt et al. and Kim et al. as applied to claims 10, 14, 15, 17, 18, 20

above, and further in view of de la Poterie et al. (5,972,354) in further view of Bolich et al. (5,100,658).

Bhatt et al. and Kim et al. are applied as discussed above. The references lack a polysiloxane bond and anionic, nonionic, and cationic resins.

de la Poterie et al. teach cosmetic compositions comprising film-forming polymers. Polycondensates, such as anionic, cationic, nonionic, or amphoteric polyurethanes and mixtures thereof are taught as film forming polymers. The polyurethane is taught as comprising at least one silicone-containing block. The instant films are taught as supple, flexible, elastic, and as not substantially lifting off once applied. See Col. 2, line 17-1ine 62; Col. 3 ,line 3-Co1. 4, line 42.

Bolich et al. teach silicones, in the form of resins, as hair conditioners. See Col. 13, lines 56-65., Col. 9, lines 51-53.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the silicone containing blocks of a polyurethane resin, taught by de la Poterie et al. to the polyurethane resin of the combined references because of the expectation of achieving a polyurethane resin that imparts conditioning properties to the hair, as taught by Bolich et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add anionic, cationic, or nonionic polyurethane resins, as taught by de la Poterie et al., to the composition of the combined references because the combined references teach amphoteric polyurethanes and de la Poterie et al. teach anionic, cationic, nonionic, and amphoteric polyurethane resins as combinable and

because of the expectation of achieving compositions with films that are supple, flexible, elastic, and do not substantially lift off once applied.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard M Williams whose telephone number is 571-272-0685. The examiner can normally be reached on MF 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMW

SREENI PADMANABHAN
SUPERVISORY PATENT EXAMINER